

# THE UNIVERSITY OF AKRON

## COLLEGE OF POLYMER SCIENCE AND POLYMER ENGINEERING

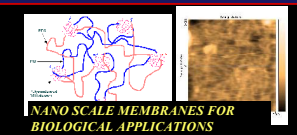
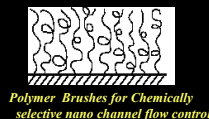
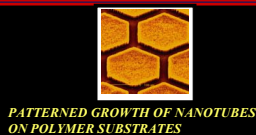
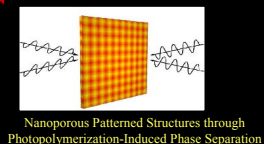
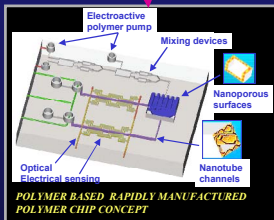
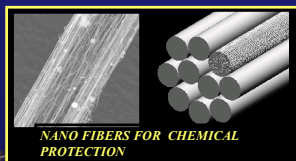
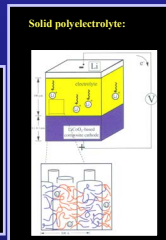
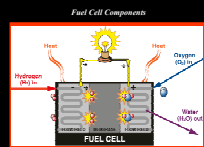
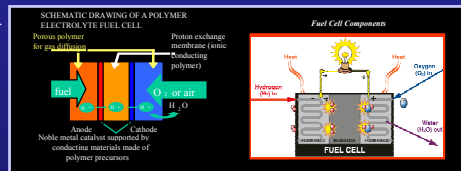
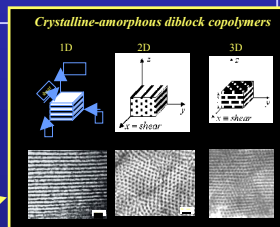
- NATIONALLY RANKED MOST COMPREHENSIVE POLYMER SCIENCE AND ENGINEERING PROGRAM
- GRADUATE DEGREES IN POLYMER SCIENCE AND POLYMER ENGINEERING
- WORLD CLASS RESEARCH FACILITIES WITH LATEST SYNTHESIS /CHARACTERIZATION/PROCESSING EQUIPMENT
- SPECIALIZED TRAINING AT ALL LEVELS (TECHNICIAN TO PhD)
- AKRON GLOBAL POLYMER ACADEMY (WEB BASED EDUCATION)
- CONTINUING EDUCATION AND WORKFORCE TRAINING

### EXPERTISE IN

- COMPUTATIONAL CHEMISTRY
- SYNTHESIS
- PROCESSING
- CHARACTERIZATION

### RESEARCH THRUST AREAS

- PHOTONICS (NEW AIR FORCE SUPPORTED CENTER)
- ENERGY GENERATION AND STORAGE (FUEL CELLS AND BATTERIES)
- NANOPATTERNED FUNCTIONAL MATERIALS
- RAPID PRECISION MANUFACTURE OF DEVICES (LAB ON A CHIP, BIOCHIP)
- FUNCTIONAL NANOFIBERS



### SPECIALIZED EQUIPMENT DEVELOPMENT FOR NANOSTRUCTURED MATERIALS

#### PROCESSING

- Polymer based manufacturing techniques for Precision Pattern formation (Precision Injection Molding, Ultrasound Assisted Micro Embossing)
- Advanced Continuous Mixing Techniques for preparation of polymer nanocomposites (e.g. Continuous chaotic mixer)
- Microlayer coextrusion process to generate micro-nano layered structures.

#### CHARACTERIZATION

- Scanning Nano-Raman Spectrometer for nano scale spatially localized chemical analysis
- Stereographic Imaging of Molecules with New Generation Electron Microscope
- Mechanical property determination of thin layer films and nanostructures through Brillouin scattering

